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# Wildfire Risk Reduction: Decision-Making in the Wildland-Urban Interface

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## Background

**Since 2000**, the western United States has incurred increased economic and social costs due to wildfire. During this time period, thousands of structures have burned and billions of dollars have been spent on fire suppression. In 2002 alone, the costs to federal agencies engaged in wildland fire suppression amounted to $1.6 billion, with losses including 6.9 million acres and 2381 structures burned.

**The impacts of wildfire are increasing for three primary reasons:**

1) A history of fire suppression policy has led to increased fuel loads on public lands.

2) Fire potential is worsening due to drought conditions, particularly in the American West.

3) The wildland-urban interface (WUI*) is growing in size, population and density, particularly in amenity-rich areas near and neighboring public lands.

*The wildland-urban interface is the area where houses meet or mix with undeveloped land.

## Overview

In order to effectively manage forested public lands in the face of increasing wildfire risk it is important to understand the conditions of the private lands that increasingly surrounding public lands. It is equally important to understand the behaviors and attitudes of land owners in order to understand the degree to which private property owners are taking action to reduce the likelihood of severe wildfire events.

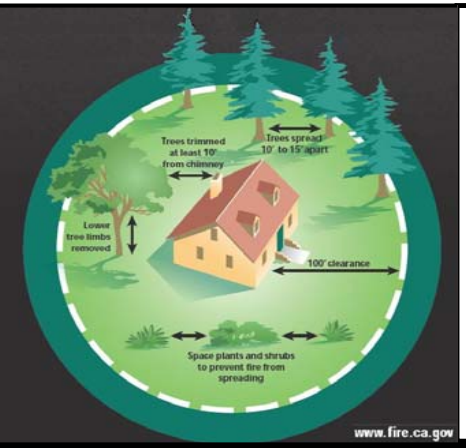
**The primary goal of this research is to develop a better understanding of the decision-making process of homeowners in wildfire prone areas regarding the adoption of wildfire mitigation strategies.** This project is the companion research endeavor to a quantitative social science survey currently being developed regarding mitigation behaviors, community interactions, and perceptions of wildfire mitigation options.

## Preliminary Findings

Efforts to reduce fuels on private property may be undertaken in order to increase the likelihood of a response from existing organizations, such as local fire departments, rather than with the expectation to alter fire behavior.

Rural communities that are dependent upon residents' participation to maintain roads and water systems appear to exhibit home-grown infrastructure and communication systems that can be used to galvanize wildfire mitigation activities.

Informal social interactions, particularly among neighbors, play key role in informing part-time residents and owners of undeveloped properties about mitigation techniques and community agendas.




**Wildfire mitigation** on private property includes fuels reduction and changes to structures in order to reduce the likelihood of ignition of a fire. Mitigation also reduces the potential speed and extent of the spread of a wildfire. Fuels reduction include the thinning of trees, trimming the lower limbs of trees to eliminate ladder fuels, removal of highly flammable shrubs, and creating defensible perimeters around structures such as houses, out buildings, and garages. Structural changes include installing fire resistant roofing, siding, and heat resistant doors and windows.

## Approach & Goals:

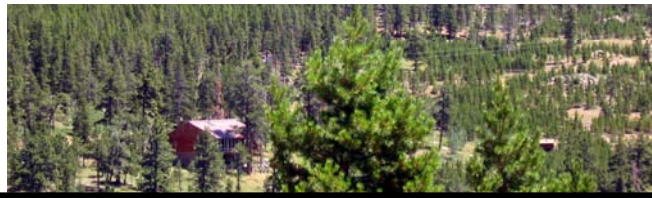
### The role of Social Science

While forestry and fire sciences offer important considerations of factors related to fire management such as fire behavior and forest conditions these fields lack considerations of the ways in which the people inhabiting fire prone communities respond to the wildfire risk they face.

In order to understand the complex decision-making processes of property owners. Participants are selected from a representative sample of 5 fire-prone communities along Colorado's Front Range for in-depth interviews.

### Interdisciplinary Collaborations

Research exploring the behaviors and attitudes of WUI residents has important applications for practitioners working in areas of wildfire risk assessment and abatement. Understanding property owners' reasons to mitigate against fire risk or to leave their property untreated will facilitate the development of educational messages and outreach programs that resonate with homeowners facing difficult decisions regarding the adoption of mitigation strategies.



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